pDPG165 35S-bar-Tr7
4562 Base Pairs

pDPG165

FIG. 1

SspI 6.24

Ampicillin

(pDPG427)
pRPA-RD-130
6.43 Kb

ori

SacI 4.10

pBS II polylinker
PstI 4.06
SalI 4.06
BamHI 4.05

Maize H3C4

PstI 3.04

SalI 3.03

Adh Intron

Maize EPSP (1102+S106)

NotI 0.39

HindIII 0.64
XbaI 0.65

nos

OTP

BamHI, PstI (approx)
BgIII

BamHI 2.43
SalI 2.43
NcoI 2.42

FIG. 2

FIG. 3

Plasmid map: pDPG434, 6128 bp

Act promoter + intron

- PvuII 2457
- SacI 2679
- NotI 2692
- XbaI 2699
- BamHI 2711
- SphI 2729
- PstI 2735
- ApoI 2878
- DraI 3059
- ApoI 3114
- EcoRI 3114
- SacI 3622
- BamHI 3816
- BglII 3848
- DraI 3888
- ApoI 3890
- BglII 3990
- ApoI 4018
- AccI 4106
- PstI 4126
- ApoI 4128
- EcoRI 4128
- SacI 4136
- NcoI 4140

sssu(CTP)

mssu (CTP)

- BamHI 4506
- PstI 4545
- BglII 4557
- BamHI 4605
- PvuII 4847

mEPSPdm

- PvuII 5709
- NcoI 5738
- XbaI 5857
- HindIII 5862
- NotI 6122
- PvuI 124
- PvuII 93

Nos

- DraI 511
- PvuI 1020

amp

- DraI 1503
- DraI 1522

ori-puc

FIG. 4

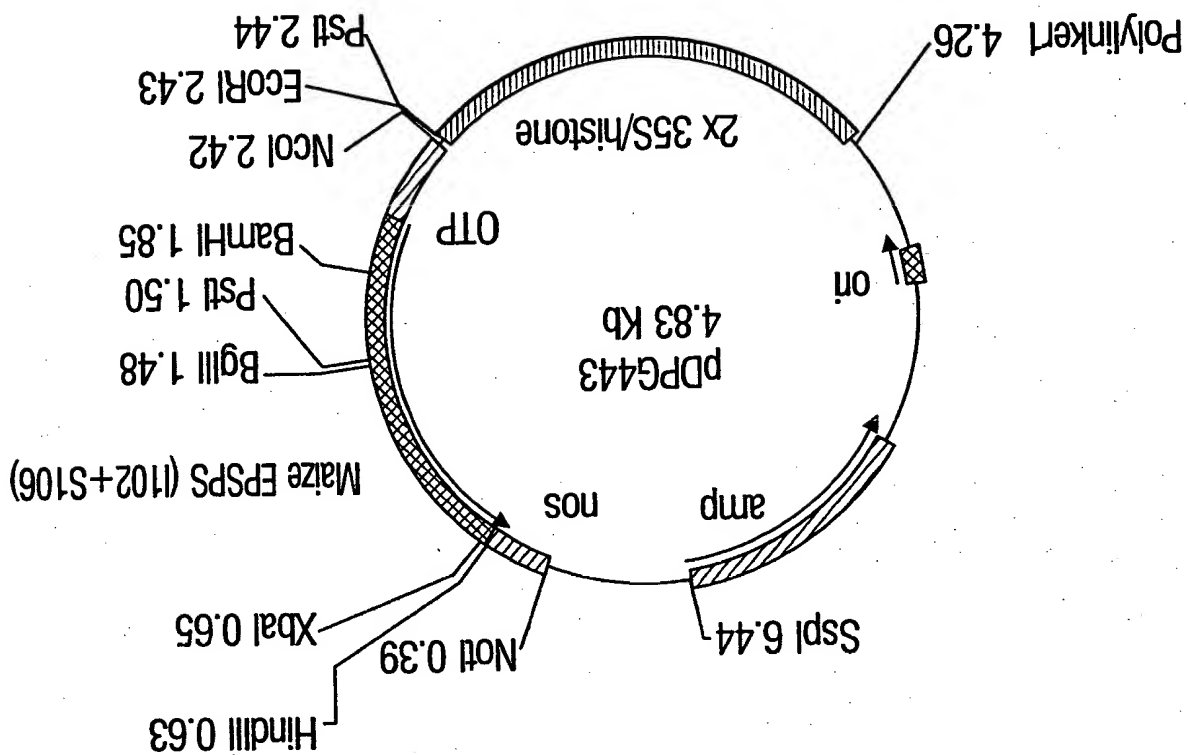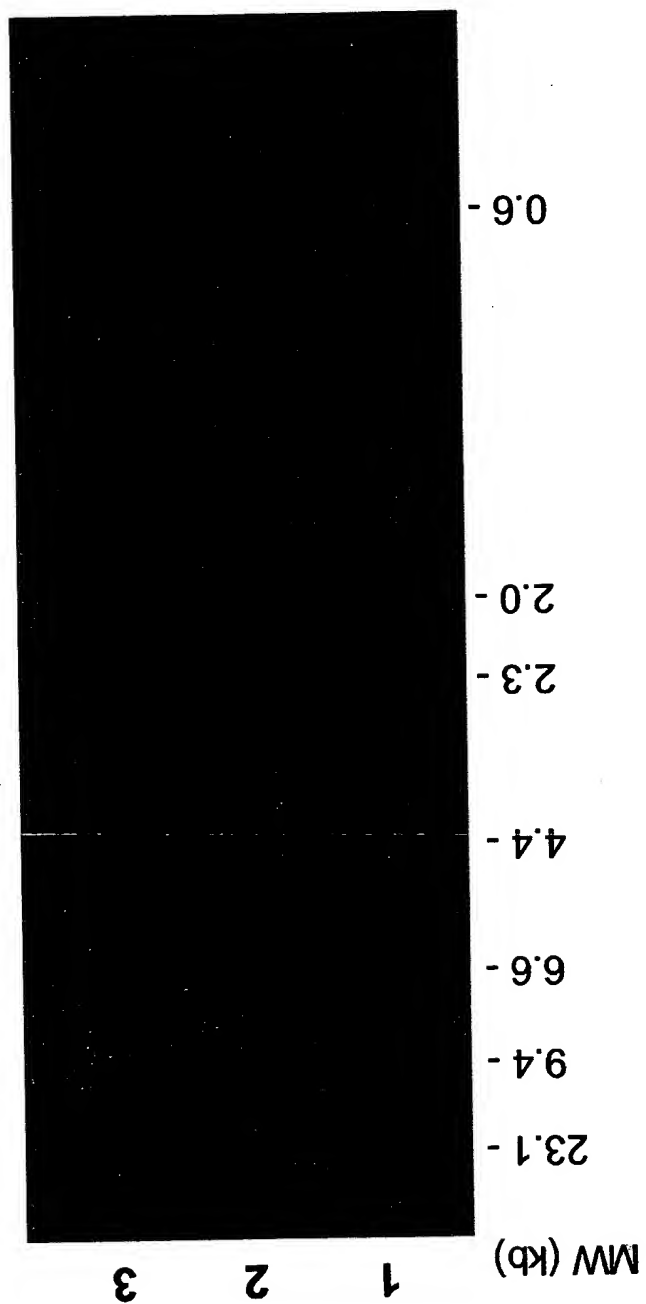Polylinker1 : 4.26/SacI.BstXI.SacII.XmaIII.NotI.XbaI.SpeI.BamHI.

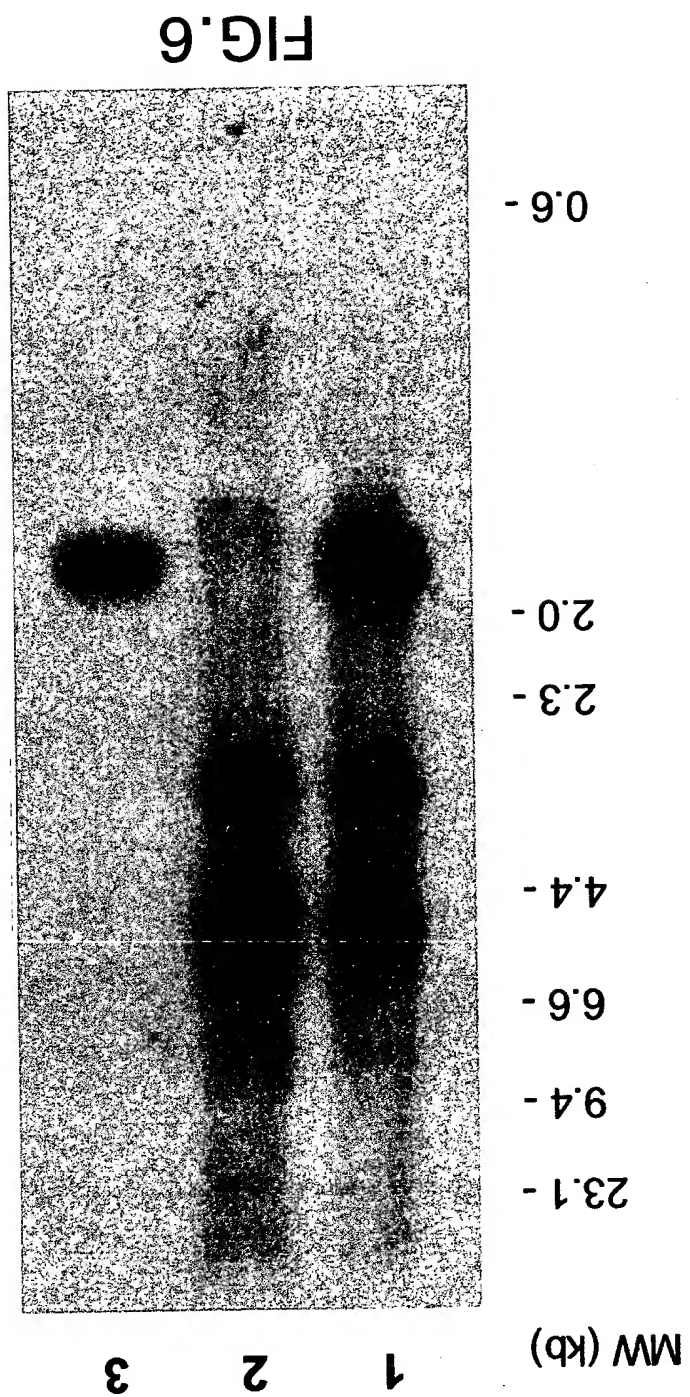Plasmid map of pDPG443 (4.83 Kb) showing:
- Polylinker1 4.26
- 2x 35S/histone
- NcoI 2.42
- EcoRI 2.43
- PstI 2.44
- OTP
- BamHI 1.85
- PstI 1.50
- BglII 1.48
- Maize EPSPS (I102+S106)
- ori
- amp
- SspI 6.44
- nos
- NotI 0.39
- XbaI 0.65
- HindIII 0.63

FIG.5A

MW (kb)

23.1 -
9.4 -
6.6 -
4.4 -
2.3 -
2.0 -

0.6 -

1   2   3

FIG.5B

FIG.6

FIG.7

HYBRID	EVENT	0X	1X	Diff	RANK	4X	Diff	RANK	MALE STERILE
DK580	GA21	104.1	102.4	1.7	1	102.3	1.8	1	None
	FI117	100.1	97.7	2.3	2	97.7	2.4	2	None
	GJ11	105.0	102.4	2.6	3	98.6	6.5	3	None
	GG25	105.5	99.4	6.2	4	97.3	8.3	4	None
DK626	GA21	98.8	97.1	1.8	3	97.9	1.0	1	None
	FI117	96.4	91.3	5.1	4	92.7	3.7	3	None
	GJ11	96.0	96.8	-0.8	1	94.0	2.0	2	None
	GG25	99.5	97.8	1.6	2	93.1	6.4	4	None

MEAN ELH 10 DAT V4 ROUNDUP APPLICATION

FIG. 8A

HYBRID	EVENT	MEAN ELH 10 DAT V8 ROUNDUP APPLICATION							MALE STERILE
		0X	1X	Diff	RANK	4X	Diff	RANK	
DK580	GA21	142.7	139.6	3.1	3	139.2	3.5	2	None
	FI117	143.4	139.5	3.9	4	139.1	4.3	3	None
	GG25	141.4	139.8	1.6	2	136.5	5.0	4	Yes
	GJ11	139.3	139.3	0.0	1	137.3	2.0	1	Yes
DK626	GA21	134.8	139.2	-4.4	1	134.0	0.8	1	None
	FI117	135.4	134.2	1.3	4	132.1	3.3	4	None
	GJ11	135.7	137.7	-2.0	2	133.1	2.6	3	Yes
	GG25	135.5	136.6	-1.0	3	134.0	1.6	2	Yes

FIG. 8B

LEVEL 1		LEVEL 2		DIFFERENCE (LEV. 1 - LEV. 2)	Prob>T
HYBRID	RU*@ TIMING	HYBRID	RU*@TIMING		
DK580	0X	DK580 FI117	0X	-16.60	0.0339
DK580	0X	DK580 FI117	4X@V4	11.33	0.1468
DK580 FI117	0X	DK580 FI117	4X@V4	27.97	0.0004
DK580	0X	DK580 GA21	0X	3.67	0.6378
DK580	0X	DK580 GA21	4X@V4	-5.35	0.4923
DK580 GA21	0X	DK580 GA21	4X@V4	-9.02	0.2478
DK580	0X	DK580 GG25	0X	-4.13	0.5957
DK580	0X	DK580 GG25	4X@V4	-3.50	0.6531
DK580 GG25	0X	DK580 GG25	4X@V4	0.63	0.9352
DK580	0X	DK580 GJ11	0X	-9.43	0.2267
DK580	0X	DK580 GJ11	4X@V4	-6.05	0.4376
DK580 GJ11	0X	DK580 GJ11	4X@V4	3.38	0.6640

FIG.9A

| LEVEL 1 | | LEVEL 2 | | DIFFERENCE (LEV.1 - LEV.2) | Prob>T |
HYBRID	RU*@ TIMING	HYBRID	RU*@TIMING		
DK626	0X	DK626 FI117	0X	-11.10	0.1559
DK626	0X	DK626 FI117	4X@V8	5.12	0.5113
DK626 FI117	0X	DK626 FI117	4X@V8	16.20	0.0388
DK626	0X	DK626 GA21	0X	-2.58	0.7401
DK626	0X	DK626 GA21	4X@V8	-9.63	0.2171
DK626 GA21	0X	DK626 GA21	4X@V8	-7.05	0.3658
DK626	0X	DK626 GG25	0X	-6.93	0.3738
DK626	0X	DK626 GG25	4X@V8	23.97	0.0024
DK626 GG25	0X	DK626 GG25	4X@V8	30.90	0.0001
DK626	0X	DK626 GJ11	0X	1.70	0.8272
DK626	0X	DK626 GJ11	4X@V8	27.62	0.0005
DK626 GJ11	0X	DK626 GJ11	4X@V8	25.92	0.0011

FIG.9B

MW (kb)

23.1 -

9.4 -
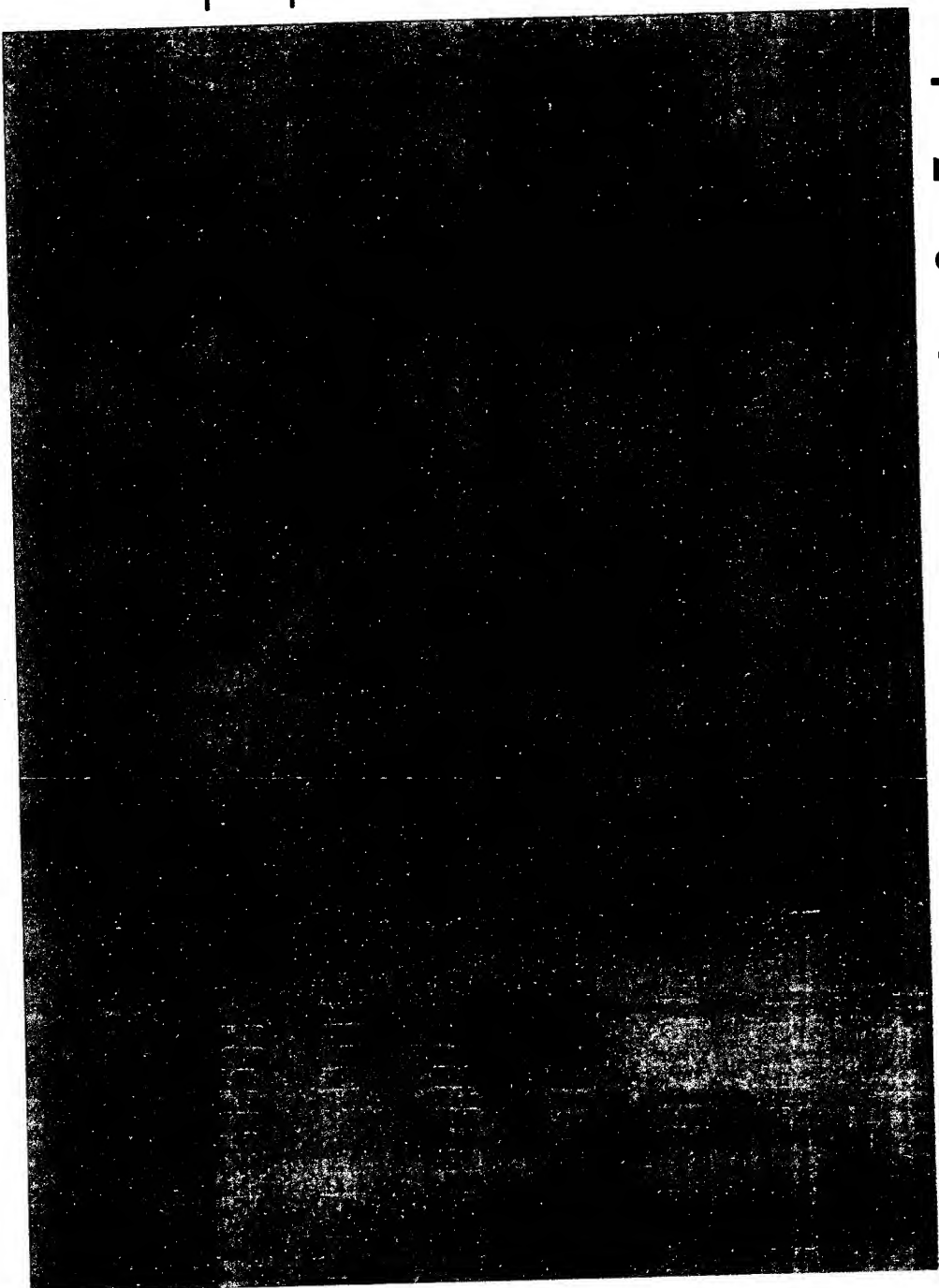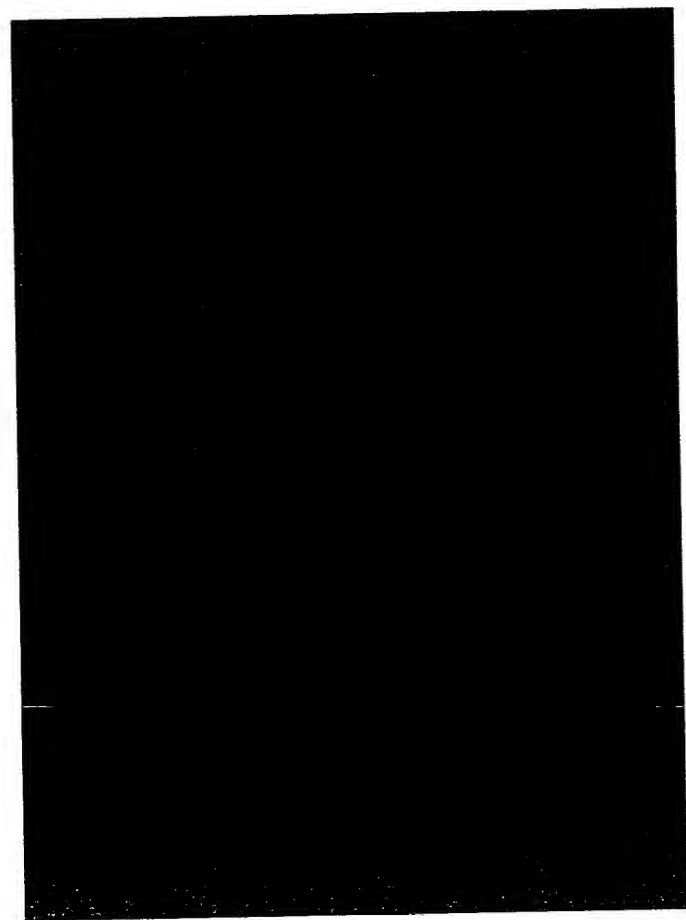
6.6 -
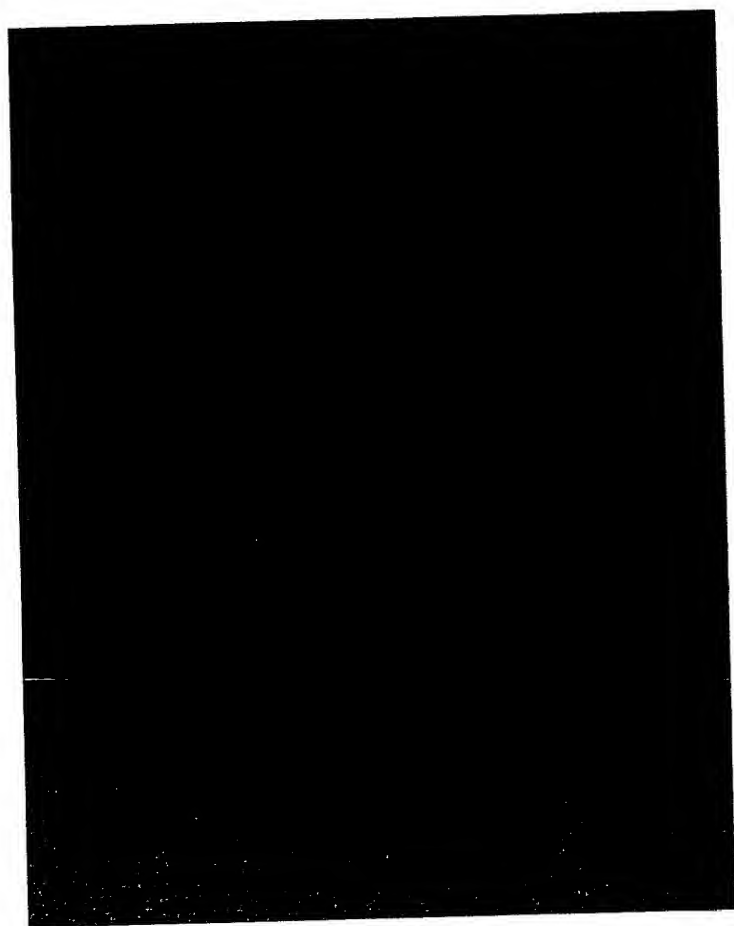
4.4 -

2.3 -
2.0 -

1 2 3 4 5 6 7 8 9 10 11 12 13

FIG.10

FIG.11A

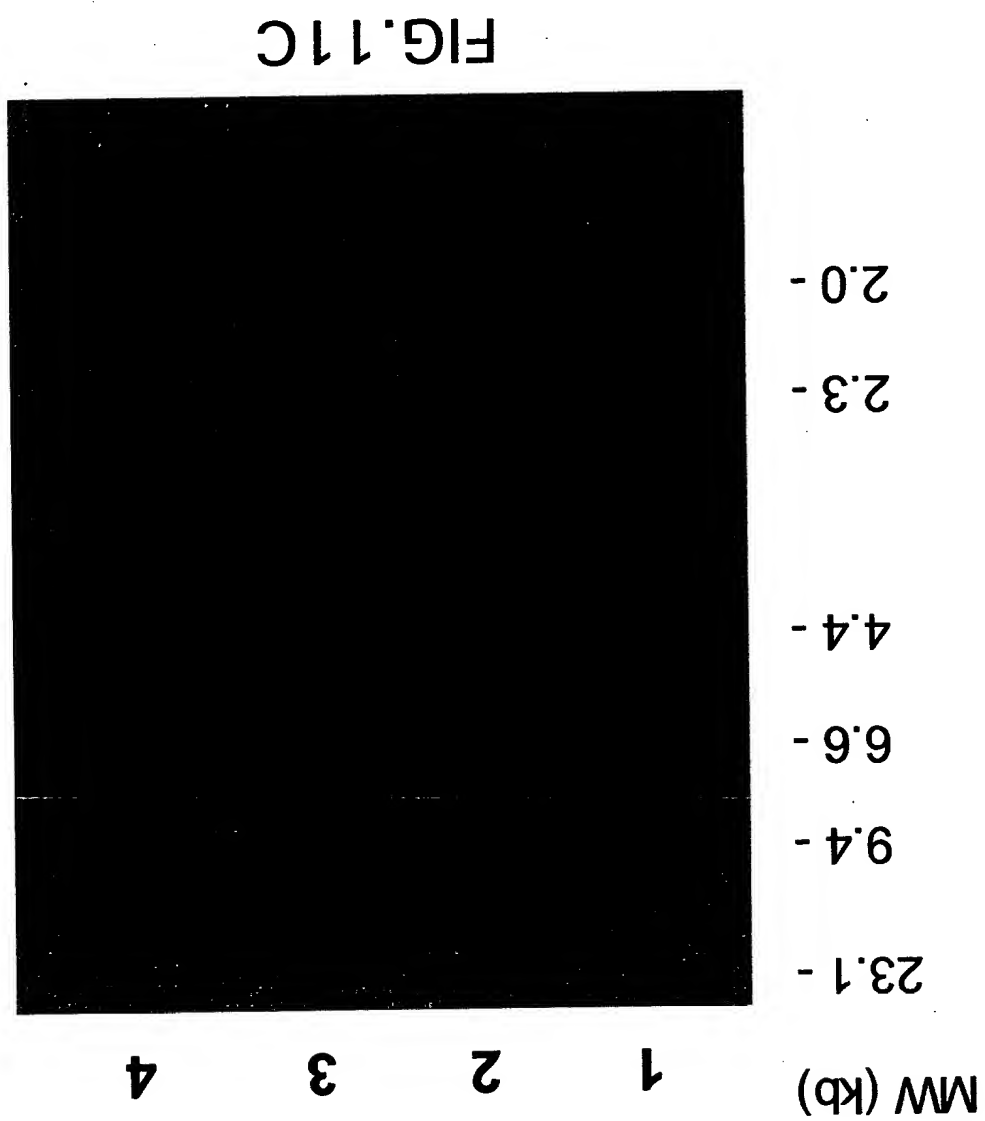FIG.11C

MW (kb)

23.1 -
9.4 -
6.6 -
4.4 -

2.3 -
2.0 -

1   2   3   4

```
  1  MASISSSVAT  VSRTAPAQAN  MVAPFTGLKS  NAAFPTTKKA  NDFSTLPSNG
 51  GGRVQCMQVW  PAYGNKKFET  LSYLPPLSMA  PTVMMASSAT  AVAPFQGLKS
101  TASLPVARRS  SRSLGNVSNG  GRIRCMAGAE  EIVLQPIKEI  SGTVKLPGSK
151  SLSNRILLIA  ALSEGTTVVD  NLLNSEDVHY  MLGALRTLGL  SVEADKAAKR
201  AVVVGCGGKF  PVEDAKEEVQ  LFLGNAGIAM  RSLTAAVTAA  GGNATYVLDG
251  VPRMRERPIG  DLVVGLKQLG  ADVDCFLGTD  CPPVRVNGIG  GLPGGKVKLS
301  GSISSQYLSA  LLMAAPLALG  DVEIEIIDKL  ISIPYVEMTL  RLMERFGVKA
351  EHSDSWDRFY  IKGGQKYKSP  KNAYVEGDAS  SASYFLAGAA  ITGGTVTVEG
401  CGTTSLQGDV  KFAEVLEMMG  AKVTWTETSV  TVTGPPREPF  GRKHLKAIDV
451  NMNKMPDVAM  TLAVVALFAD  GPTAIRDVAS  WRVKETERMV  AIRTELTKLG
501  ASVEEGPDYC  IITPPEKLNV  TAIDTYDDHR  MAMAFSLAAC  AEVPVTIRDP
551  GCTRKTFPDY  FDVLSTFVKN
```

FIG. 12

FIG. 13-1	FIG. 13-2
FIG. 13-3	FIG. 13-4

FIG. 13

963019 Test Map Example

REP	ROW	COL1	COL2	COL3	COL4	COL5	COL6	COL7	COL8
3	4	DK580	DK580	DK580	DK580	DK580	DK580	DK626	DK626
3	4	GA21	GA21	GA21	GA21	GA21	GA21	GJ11	GJ11
3	4	T-4X@V4	T-4X@V8	T-4X@V8	N-OX	T-OX	T-OX	T-4X@V4	T-1X@V8
3	3	DK580	DK580	DK580	DK580	DK580	DK580	DK626	DK626
3	3	FI117	FI117	FI117	FI117	FI117	FI117	FI117	GA21
3	3	T-1X@V4	T-1X@V8	T-4X@V4	T-4X@V4	T-4X@V4	T-4X@V8	GA21	DK626
3	2	GG25	GG25	GG25	GG25	GG25	GG25	GG25	GG25
3	2	DK580	DK580	DK580	DK580	DK580	DK580	DK626	DK626
3	2	T-1X@V8	T-4X@V8	N-OX	T-1X@V4	N-OX	T-4X@V4	T-1X@V4	T-4X@V8
3	1	DK580	DK580	DK580	DK580	DK626	DK626	DK626	DK626
3	1		T-4X@V8	GJ11	GJ11	GJ11	GJ11	GJ11	GJ11
2	1	N-OX	T-1X@V4	N-OX	T-1X@V4	T-OX	T-1X@V8	T-4X@V8	T-OX
3	2	T-1X@V8	DK580	DK580	DK580	DK580	DK580	DK626	DK626
3	3	GG21	GJ11	GJ11	GJ11	GJ11	FI117	GJ11	GJ11
3	3	T-4X@V8	GA21	GA21	GA21	GJ11	T-1X@V8	T-1X@V8	T-OX
3	4	T-OX	T-1X@V8	N-OX	T-OX	T-OX	T-4X@V8	T-4X@V4	T-4X@V8
2	4	DK580	DK580	DK580	DK580	DK580	DK580	DK626	DK626
2	3	GG21	GA21	GA21	GA21	GA21	GA21	GG25	GG25
2	2	DK580	DK580	DK580	DK580	DK580	DK580	DK626	DK626
2	2	T-1X@V8	T-1X@V4	T-4X@V4	T-1X@V4	T-1X@V8	T-4X@V4	GA21	GA21
2	2	GG25	GG25	GG25	GG25	GG25	GG25	GG25	GG25
2	3	DK580	DK580	DK580	DK580	DK580	DK580	DK626	DK626
2	1	T-1X@V8	N-OX	N-OX	T-1X@V4	T-1X@V8	T-1X@V8	T-4X@V4	T-OX
2	1	DK580	DK580	DK580	DK580	DK580	DK580	DK626	DK626
2	1	FI117		FI117	FI117	FI117	FI117	FI117	FI117
2	1	T-4X@V8	N-OX	T-OX	T-1X@V4	T-1X@V8	T-4X@V4	GA21	N-OX

FIG. 13-1

FIG. 13-2

COL9	COL10	COL11	COL12
DK626	DK626	DK626	DK626
N-0X	GJ11	GJ11	GJ11
DK626	T-4X@V8	T-0X	T-1X@V4
N-0X	DK626	DK626	DK626
DK626	GA21	GA21	GA21
GG25	T-0X	T-1X@V4	T-4X@V8
T-0X	DK626	DK626	DK626
DK626	GG25	GG25	GG25
F1117	T-1X@V8	T-4X@V4	T-4X@V4
DK626	DK626	DK626	DK626
GJ11	F1117	N-0X	T-0X
T-4X@V8	T-4X@V4	DK626	GJ11
DK626	DK626	N-0X	DK626
GG25	GJ11	DK626	T-1X@V4
T-4X@V8	T-4X@V4	GG25	F1117
DK626	DK626	T-1X@V4	DK626
F1117	GG25	DK626	N-0X
T-1X@V4	T-1X@V8	F1117	DK626
DK626	DK626	T-1X@V8	GG25
GA21	F1117	DK626	T-4X@V4
T-4X@V8	T-4X@V8	GA21	DK626
	DK626	T-0X	N-0X
	GA21		DK626
	T-1X@V8		GA21
			T-1X@V4

1	4	DK580	DK580	DK580	DK580	DK580	DK626	DK626
1	4	GA21	GA21	GA21	GA21	GA21	GA21	GA21
1	4	T-4X@V8	N-0X	T-4X@V4	T-1X@V4	T-0X	T-4X@V4	T-4X@V8
1	3	N-0X	DK580	DK580	DK580	DK580	DK626	DK626
1	3	DK580	F1117	T-1X@V8	F1117	F1117	F1117	F1117
1	3	F1117	T-1X@V4	N-0X	T-0X	T-4X@V8	T-1X@V4	T-4X@V8
1	2	T-4X@V4	DK580	DK580	DK580	DK580	DK626	DK626
1	2	DK580	GJ11	GJ11	GJ11	GJ11	GG25	GG25
1	2	GJ11	T-4X@V4	T-0X	T-1X@V4	T-1X@V8	T-4X@V4	T-4X@V8
1	1	T-4X@V8	DK580	DK580	DK580	DK580	DK626	DK626
1	1	DK580	GG25	GG25	GG25	GG25	GJ11	GJ11
1	1	N-0X	T-0X	T-4X@V8	T-1X@V4	T-1X@V8	DK626	T-1X@V8
1	1		T-4X@V4				T-4X@V8	

FIG. 13-3

DK626 GA21 T-0X	DK626 GA21 T-1X@V4	DK626 GA21 T-1X@V8	DK626
DK626 F1117 T-4X@V4	DK626 N-0X	DK626 F1117 T-1X@V8	N-0X DK626 F1117 T-0X
DK626 GG25 T-0X	N-0X	DK626 GG25 T-1X@V8	DK626 GG25 T-1X@V4
DK626 GJ11 T-0X	DK626 GJ11 T04X@V8	DK626 GJ11 T01X@V4	DK626 N-0X

FIG. 13-4

FIG. 14

EcoRI 2.43

pBSII Polylinker

NcoI 2.42
SacI 2.48

OTP

Ori

BamHI, PstI (approx)

Maize EPSP
(1102+S106)

PDDG 425
4.83 kb

Ampicillin

nos

XbaI 0.65
HindIII 0.64
NotI 0.39
SspI 4.64

FIG. 15

pDPG405
6811 bp

502 PROMOTER

hybrid double 35S; single histone

EcoRI(2475)
PstI(2480)
NcoI(2485)

GUS

NOS

SacI(4545)
BstXI(4540)
SacII(4535)

pBSII SK&(STRATAGENE)

HindIII (671)
PBS polylinker
KpnI(657)